PIECES DE RECHANGE

SCHAUBLIN 70

SCHAUBLIN 70

INSTRUCTION DE SERVICE

A remettre à la personne chargée de la conduite de la machine.

SERVICE INSTRUCTIONS

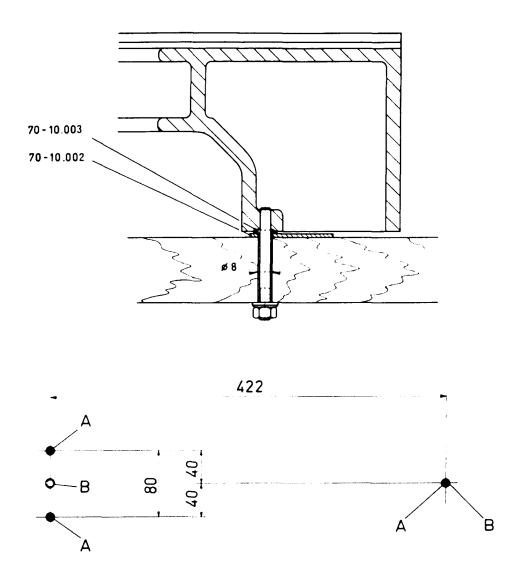
To be handed to the operator in of the machine.

BETRIEBSAN WEISUNG

Diese Anweisung ist für die Maschine bedienende Person bestimmt.

Machine SCHAUBLIN	type	:	
Machine / Maschine	N°	:	
BL	N°	:	
Tension /Spannung	Volts	•	

FITTING INSTRUCTIONS FOR BED OF SCHAUBLIN 70 LATHE

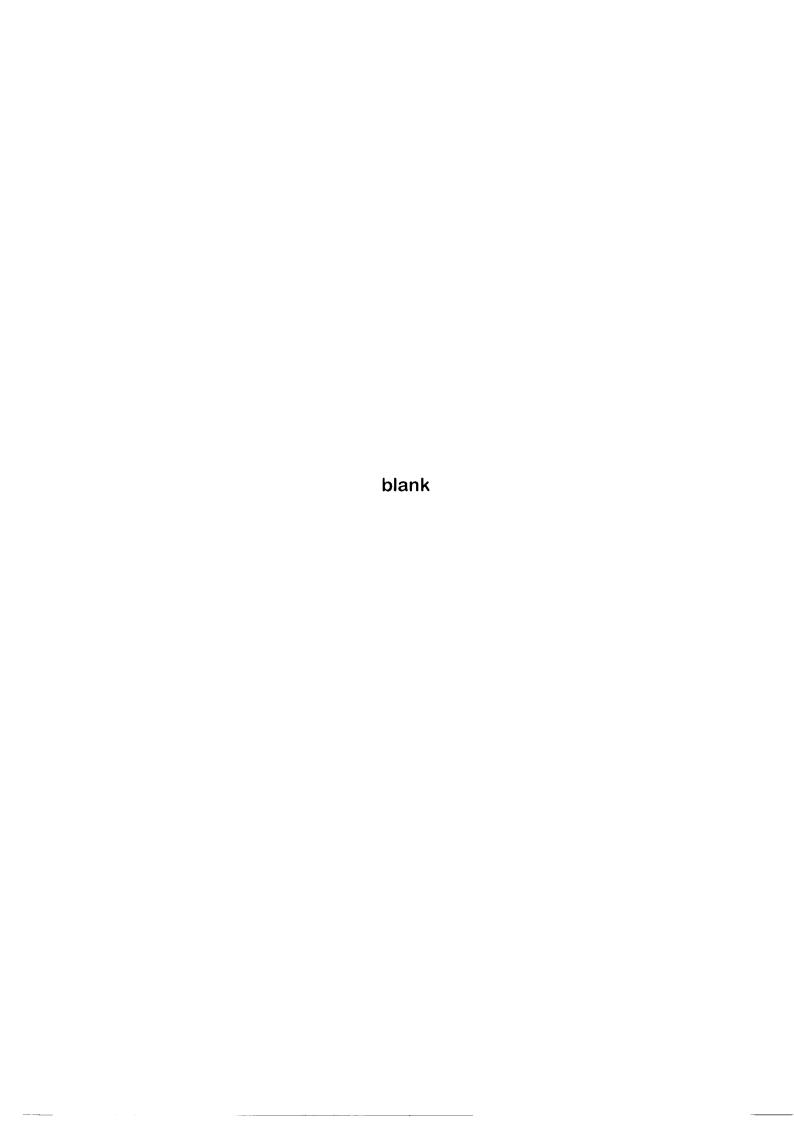


Bed of SCHAUBLIN 70 bench-type lathe is planed and scraped with extreme accuracy and must therefore not be fixed on uneven surface.

The bed has three bearing points «A» and two fixation holes «B» as shown on the above sketch. Three special washers 70-10.003 put at the bearing points eliminate any distortion which may be caused by unlevelled benches. The bed is to be fixed with two stud-bolts.

To prevent the special washers from penetrating in the wood, put steel plate 70-10.002 between bedfoot and bench as per sketch. These plates are supplied with the bed. After fitting, check if a thickness of a small rule is guaranteed between bedfoot and steel plate.

It is evident that a wooden bench does not offer absolute stability. Thanks to its outstanding conception, only our east-iron cabinet guarantees a perfect base for the lathe. Therefore, check the bed position periodically and re-adjust if necessary.



HEADSTOCK W12 WITH PLAIN BEARINGS (Open design)

Type 70-32 with hand-operated drawbar
Type 70-32L with lever-operated quick-closing
Lubrication by capillary action (an oil reservoir on each bearing) or oil mist
For standard speed range

SPECIFICATION	Item N	40	70-32	70-32L
Thread on spindle nose		Ø 22,	6 x 2 mm (.890 x .079'')
Length of thread on spindle nose		10	mu (a	25/64")
Cylindrical seat of spindle nose		Ø 23	,	(.905'')
Spindle bore		Ø 12 i	m m	(15/32'')
Maximum bore through standard collet		Ø 8,2	100 m ((21/64'')
Internal taper of spindle		15°		
Width of pulley steps		19	mm ((.748'')
Diameter of pulley steps		Ø 46/	′62/78 mn	$(1 \ 3/4 - 2 \ 1/2 - 3'')$
Weight in kg (lbs)		5.30	00 (11.680	6.700 (14.770)

MAINTENANCE

A. CLEANING ON RECEIPT

All external and internal parts are given a coat of anti-rust grease prior to despatch.

This grease has no lubricating property. Its presence may cause serious seizures, even several weeks after the machine has been put into service. Clean the entire unit with a chemically neutral withe clock (free of acid or chlorine) soaked in paraffin. Avoid using alcohol or petrol (which often contains alcohol) or any organic product that would dissolve the cellulose paint.

B. LUBRICATION OF BEARINGS (applicable only to lubrication by capillary action)

The oil which is contained in reservoirs, rises to the top of the tubes by capillary action and then drips on to the bearings, thus ensuring constant lubrication. Fill the reservoirs to within 4 mm (5/32") of the top once a day.

Never pour the oil direct into the tubes, as too great a flow can cause harmful overheating of the bearings.

Above all avoid using grease!

Use preferably a good mineral oil with a viscosity of about 3°E at 50°C (122°F)

Note: Headstocks lubricated by oil mist require no other form of lubrication.

C. LEVER-OPERATED QUICK-CLOSING ATTACHMENT

The fulcrum pin of the lever (70-P-201) is provided with a lubrication nipple. Once a week, give a few shots of oil to this point.

Oil also the dogs (70-P-208) first unscrewing and removing the drawbar through the sleeve (70-P-210).

The bearing (ND 993-L06) is prepacked with grease. (For the grade of oil recommended, see ING 57-1).

ADJUSTMENT OF THE SPINDLE BEARINGS

The two bearings are carefully adjusted during assembly of the headstock. No subsequent adjustment is necessary until after a relatively long period of running. Only a skilled person should be permitted to make the adjustments described below, as they call for the greatest possible care.

A. TAKING UP RADIAL AND AXIAL PLAY IN THE FRONT BEARING

- 1. Determine the exact amount of radial play by means of a comparator reading to within 1/1000 mm (.00004'').
- 2. Remove the spindle in accordance with the following instructions:
 - a) Remove the drawbar (70-32.022) and, in general, everything mounted on the spindle: collet, faceplate, a.s.o...
 - b) Unscrew the screw (70-32.020).
 - c) Unscrew the dust cap (70-32.027) and push it back into the recess provided in the pulley for this purpose.
 - d) Loosen the 2 screws (D M5x4) in the nut (70-32.011) and completely unscrew the nut.
 - e) Withdraw the spindle completely by striking the rear end with a fibre hammer.

Note: During this operation, it is very important to support the spindle at the front in order to keep it centred, on account of the taper front bearing.

f) Remove the needle thrust bearing (Nadella Ax-5-2542).

There are now two ways of taking up the play:

A1. TAKING UP RADIAL AND AXIAL PLAY BY CHANGING THE NEEDLE THRUST BEARING (NADELLA Ax-5-2542)

Replace the needle thrust bearing by one of the same type, but of less thickness, and scrape the taper bore of the bearing (70-32.008) as necessary.

A2. TAKING UP RADIAL AND AXIAL PLAY BY SCRAPING THE FRONT FACE OF THE BEARING (70-32.008)

To take up $1/1000 \, \text{mm} \, (.00004'')$ radial play, the front face of the bearing (70-32.008) must be machined $9.5/1000 \, \text{mm} \, (.000374'')$. Therefore, to determine the thickness of metal to be removed from the face, all that is necessary is to measure the amount of play to be taken up.

- 1. Measure the amount of play to be taken up by means of a comparator reading to within 1/1000 mm (.00004).
- 2. Remove the ring (70-32.013) to expose the front face of the bearing.
- 3. Remove also the ring (70-32.014).
- 4. Scrape the front face of the bearing with an appropriate tool until the radial play required, i.e. .005 to .007 mm (.00020 to .00028"), is obtained.
- 5. Check also the axial play, which must be .008 to .010 mm (.00031 to .00039"). To obtain this result, it is necessary to machine the taper bore of the bearing.

Note: This delicate work necessitates expensive special equipment. Customers who do not possess such equipment are therefore advised to return the headstock to us for adjustment rather than to undertake the work themselves.

B. TAKING UP RADIAL AND AXIAL PLAY IN THE REAR BEARING

- l. Measure the amount of radial play by means of a comparator reading to within $1/1000 \text{ mm} \ (.00004\text{''})$.
- 2. Unscrew the nut (70-32.007).
- 3. Take out the taper bearing (70-32.004). Remove the metal strip placed in one slot of the bearing.
- 4. Reduce the thickness of this strip taking care to measure it perfectly.
- 5. Machine the bore of the bearing (70-32.004) in order to allow, after refitting, the spindle to run freely with a radial play of .005 to .007 mm (.00020 to .00028").

SPINDLE-LOCKING DEVICE

The piston (70-32.016) can be inserted into any of the holes in the side of pulley (70-32.026), thus allowing the spindle to be locked, by means of the knurled knob (70-31.015), as and when required.

LEVER-OPERATED QUICK-CLOSING ATTACHMENT

A. FITTING AND OPERATION

The bush (70-P-207) of the quick-closing attachment is mounted on the end of the headstock spindle and locked by a key.

The support (70-30.603) is fixed to the frame of the headstock by means of 3 screws (CCM M6x20). By pushing the lever (70-P-201) to the left, its nose should locate against the screw (DCMB M6x25). If it is not the case, unlock the nut (M6) and adjust the screw (DCMB M6x25).

To clamp the workpiece, pull the lever (70-P-201) to the right (towards you).

To unclamp the workpiece, push the lever to the left.

B. ADJUSTMENT

- 1. Pull the lever (70-P-201) towards you.
- 2. Mount the collet in the spindle together with the workpiece.
- 3. Clamp the workpiece lightly by screwing up the sleeve (70-P-210).
- Push the lever (70-P-201) to the left and make the final adjustment of the closing with the sleeve (70-P-210).
 The sleeve (70-P-210) is automatically locked in all its positions by two spring

C. REPLACEMENT OF THE CLAMPING DOGS

When replacing the clamping dogs (70-P-208), it is essential to fit two parts of the same number. To replace, proceed as follows:

- 1. Take out the drawbar completely, together with the sleeve (70-P-210).
- 2. Release the (Truarc 5103-112) circlip and withdraw the bush (70-P-213) about 1 cm (1/2'') in order to be able to free the two dogs from the slot in the bush. Be careful not to withdraw the bush (70-P-213) too far, otherwise the springs of the pistons (70-P-214) may get lost.
- 3. Place the new dogs in position.

loaded pistons (70-P-214).

- 4. Secure the (Truarc 5103-112) circlip and refit the drawbar.
- D. MOUNTING THE LEVER-OPERATED QUICK-CLOSING ATTACHMENT (70-P-200) ON THE STANDARD DRAWBAR-OPERATED HEADSTOCK (70-32).

Conversion of the drawbar-operated headstock (70-32) into a headstock (70-32L) with a quick-closing lever can be carried out a any time, without difficulty, by a skilled person.

Cleaning on receipt

The lever-operated quick-closing attachment is supplied completely assembled. It is given a coat of special anti-rust grease prior to despatch. This must be completely removed before the attachment is used, as it has no lubricating property.

Fitting

- 1. Take out the drawbar (70-32.022) with the handwheel (70-P-60a). The drawbar cannot be used for quick-closing.
- 2. Place the flat key (70-21.874) in the seating provided on the headstock.
- 3. Place the flat key (65-P-67) in the setting provided on the spindle (70-32.003).
- 4. Fit the quick-closing attachment, inserting the drawbar (70-30.602) into the spin-dle.
 - See that the flat key (65-P-67) enters the slot in the sleeve (70-P-207).
- 5. Place the support (70-30.603) against the frame of the headstock and put the 3 screws (CCM M6x20) in position, tightening them slightly.
- 6. Run the machineat a reduced speed and adjust the eccentric screws (70-P-206) of the lever (70-P-201) until the sleeve (70-P-205) is immobilized in the vertical plane.
 - (Note: Any distortion in the sleeve (70-P-205), however slight, can cause very rapid wear in the bearing (ND 993-L06).
- 7. On completion of the adjustment, lock the 3 screws (CCM M6x20) securely.
- 8. Lubricate the entire attachment (see under «Maintenance of headstock»).

Adjustment (see above).

13.11.64. JPN/MCh

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70-45,512

65-CH-84

SCREW-OPERATED CARRIAGE 70-45

for SCHAUBLIN 70 high-precision lathe

(suitable also for Schaublin 65 lathe with special toolpost)

ADVANTAGES

- 1. Great rigidity and high precision
- 2. Fully protected slideways with forced-feed lubrification (cleaning action)
- 3. Micrometer screws supported at both ends; special patented ball bearing at handle end for taking up axial and radial play

102-CH-170

- 4. Patented device for rapid and accurate resetting of swivel base to zero
- 5. Dovetail on bottom slide for taking and adjustable rear toolholder
- 6. Harmonious lines and superior finish

SPECIFICATION

Longitudinal stroke Transverse stroke

Accuracy of reading of adjustments

Top slide swivelling

Height of centre above carriage

Swing over carriage

without rear toolholder with rear toolholder

Size of tools Net weight

60 mm (2 3/8'') 65 mm (2 9/16") 1/100 mm (1/1000")2 x 90° 16 mm (5/8")

85 mm (3 3/8'') 45 mm (1 3/4") $8 \times 8 \text{ mm} (5/16x5/16")$

3.4 kg (7.500 lbs.)



SLIDEWAYS, MICROMETER SCREWS AND NUTS

Give 4 or 5 shots twice a week through the two nipples provided, good light mineral oil with a viscosity of 3° Engler at using 50° C.



Use a good consistent ball-bearing grease and renew it every 5 years, proceeding as follows:

- 1. Drive out the taper pin 65-CH-84
- 2. Withdraw the handle 70-45.512 and the divided drum 70-45.506.
- 3. Remove the cup spring 70-45.507 and the Seeger clip 102-65.010 and completely unscrew the nut 70-45,509.
- 4. Remove the ball-bearing ring 102-CH-170 and slightly slacken the screw 70-45.508 in order to be able to fill the compartment with grease. Pack the ball bearing also with grease.

ADJUSTMENTS

BALL BEARING OF MICROMETER SCREWS

- 1. Drive out the taper pin 65-CH-84.
- 2. Withdraw the handle 70-45.512 and the divided drum 70-45.506.
- 3. Remove the Seeger clip 102-65.010 and tighten the nut 70-45.509 according to the amount of play to be taken up.

PLAY IN SLIDES

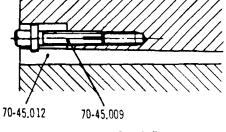
A taper gib 70-45.012 is fitted to each of the slides. Play caused by wear in the slideways can be taken up by tightening the adjusting screw 70-45,009 as required.

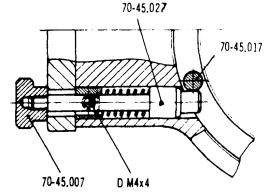
DEVICE FOR RESETTING SWIVEL BASE TO ZERO

- 1. Fix the carriage securely in correct position on the bed.
- 2. With the aid of a dial indicator, position the top slide exactly at 90°.
- Unlock the screw D M4 x 4.
- 4. Turn the knurled knob 70-45,007 until the end of the rod 70-45,027 is resting against the stop 70-45,017 and then retighten the screw D M4 x 4 securely.

70-45.507 70-45,508 grease 102-65.010 compartment 70-45.509

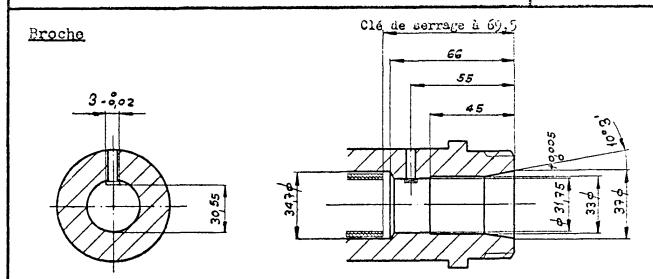
70-45,506



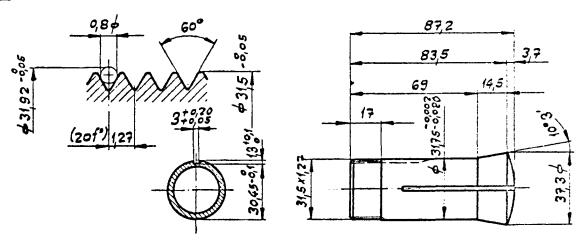


DIMENSIONS NECESSAIRES POUR L'ADAPTATION DE LA PINCE SCHAUBLIN TYPE 31,75 W

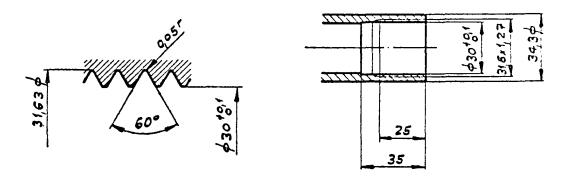
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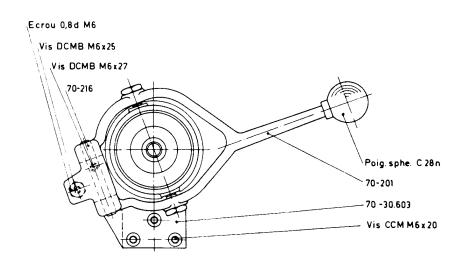


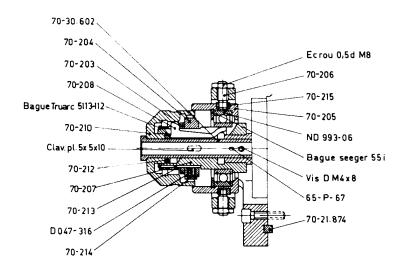
Clé de serrage

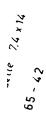


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SCHAUBLIN S.A. BÉVILARD (SUISSE)







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70 - 32. 019

Vis CCM M5x15

Butée à aiguilles "Nadella" Ax 5 - 2542

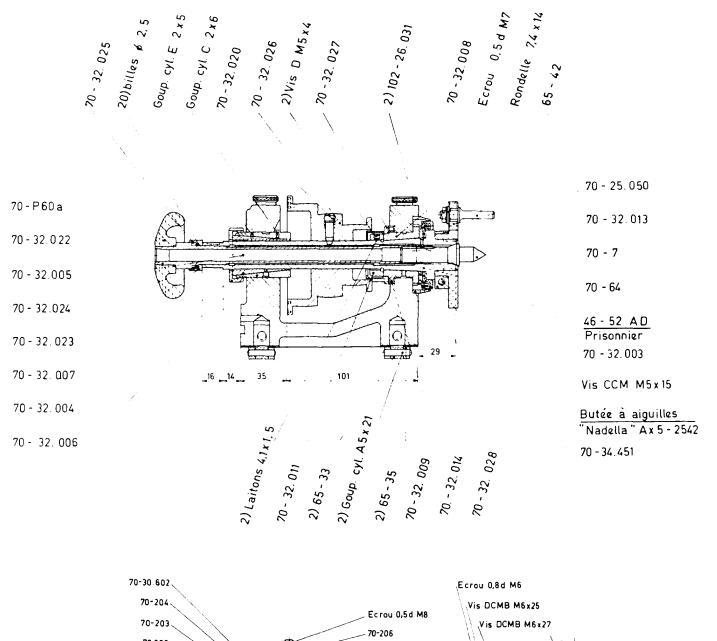
70 - 34.451

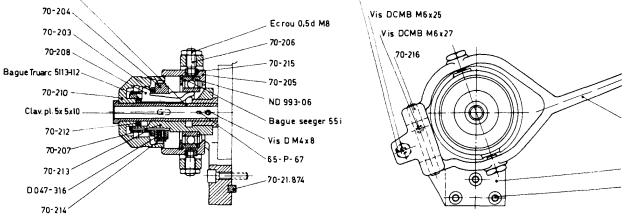
Poig. sphe. C 28n 70-201 70 -30.603 Vis CCM M6x 20

Poupée W12 à paliers lisses (exécution ouverte)

avec serrage par clé Art. Nº 70-32 ou

avec serrage rapide par levier à main Art. N° 70-32L

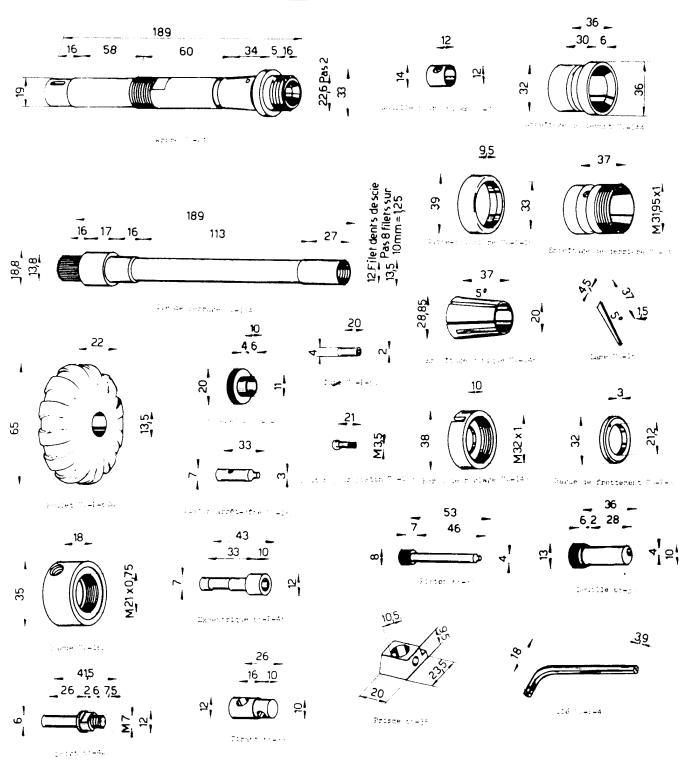




SCHAUBLIN S.A. BÉVILARD/SUISSE

TOUR 70 POUPEE 12W ART.Nº13



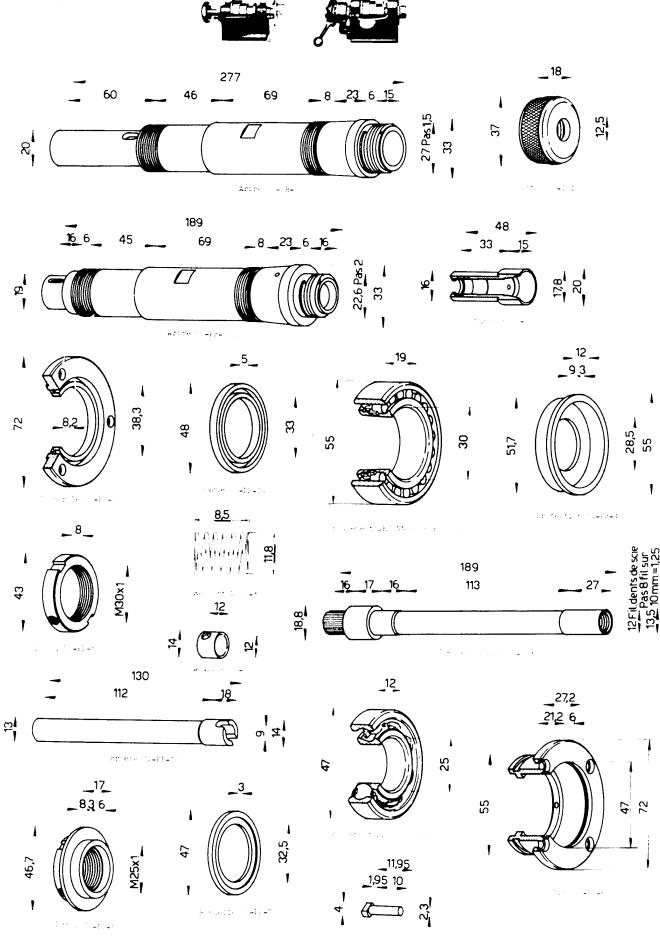


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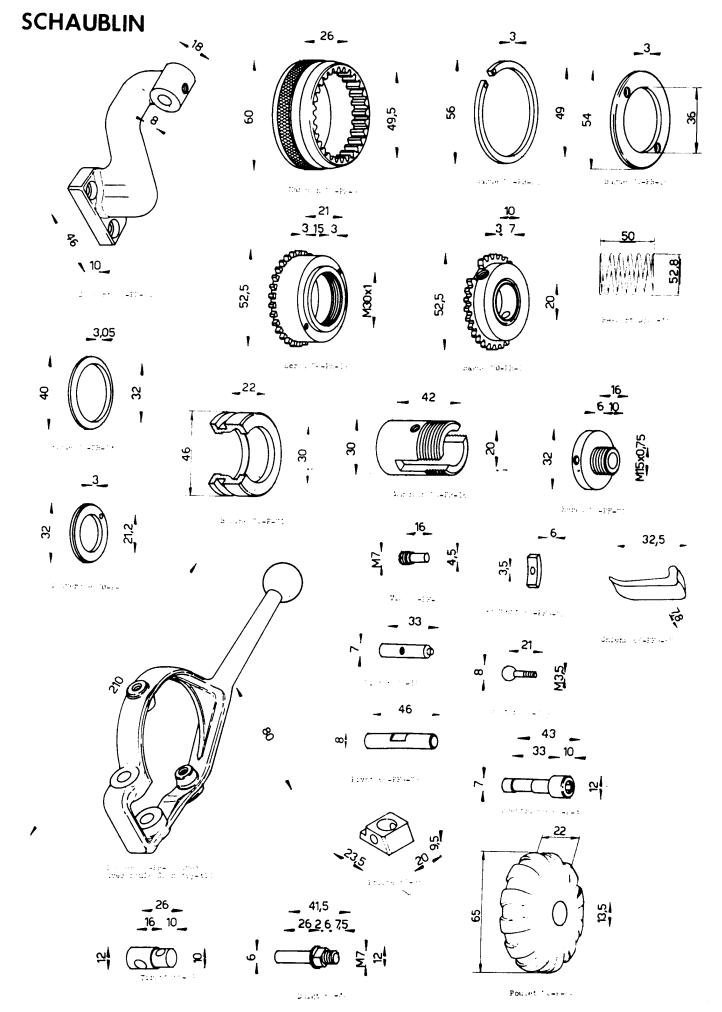
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POUPEE A ROULEMENTS 12F

ART.Nº 13R ART.Nº 197

SCHAUBLIN



TOUR 70 POUPEE A ROULEMENTS 12W ART. Nº 13R TOUR 70 POUPEE A ROULEMENTS 12F ART. Nº 197

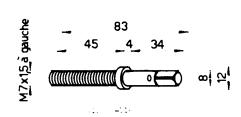


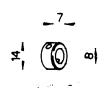
TOUR 65-70 **SCHAUBLIN**

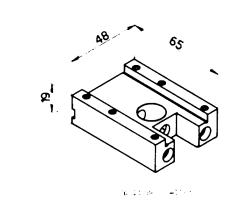
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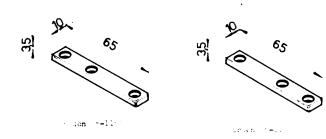


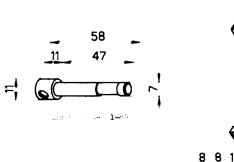


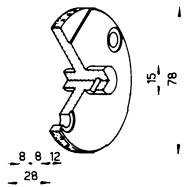






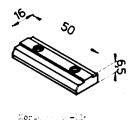


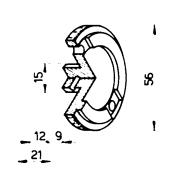




Semelie ti-.17.,pour emploi de l'étau sur appareil à fraiser SV 102

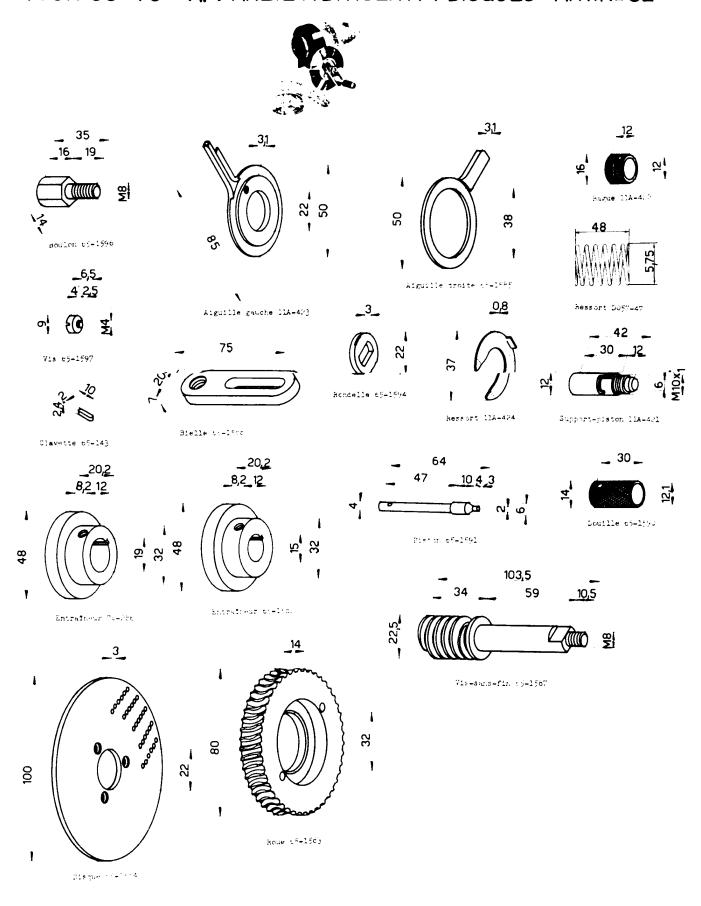




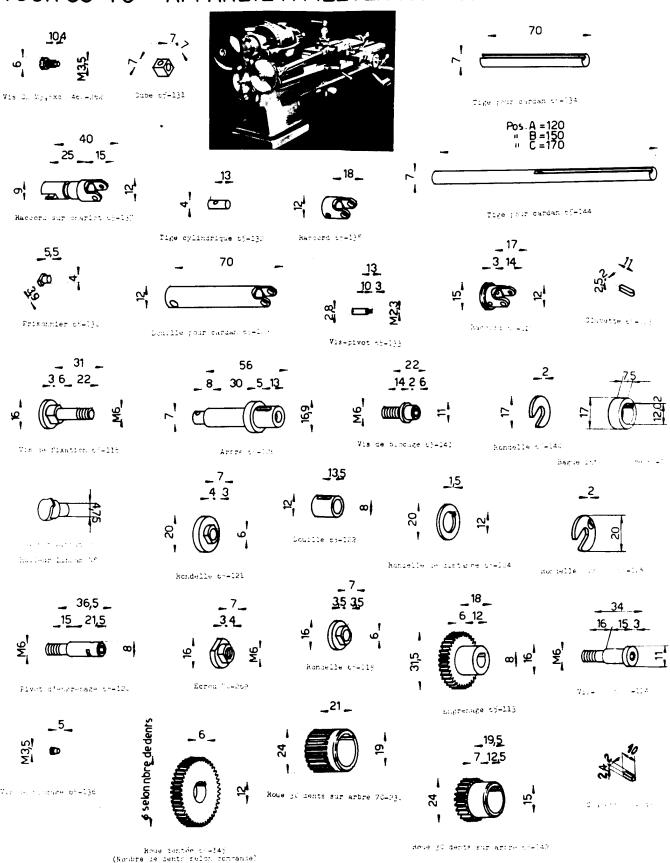


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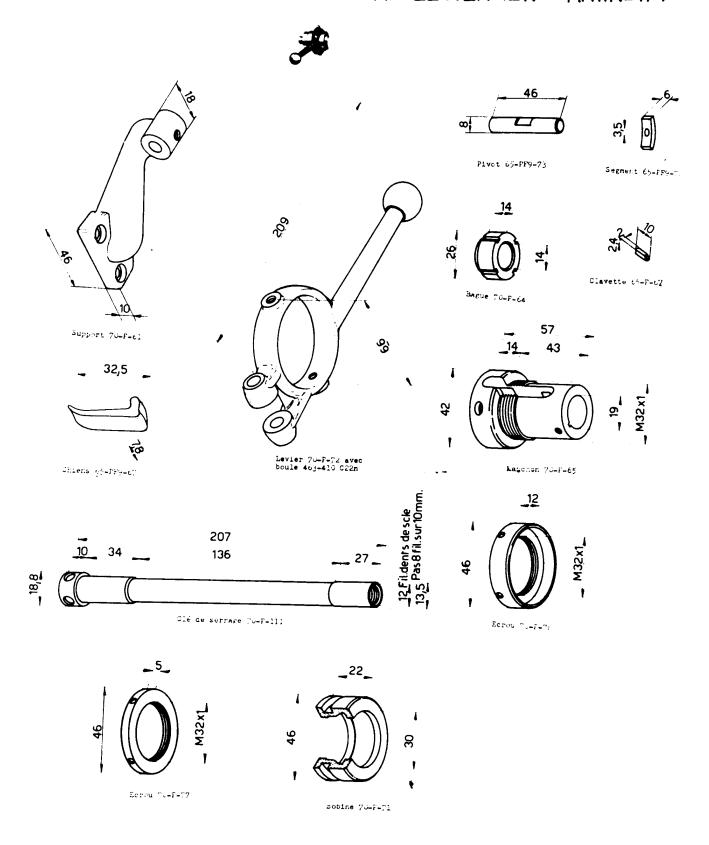
TOUR 65-70 APPAREIL A DIVISER A 4 DISQUES ART.Nº 82



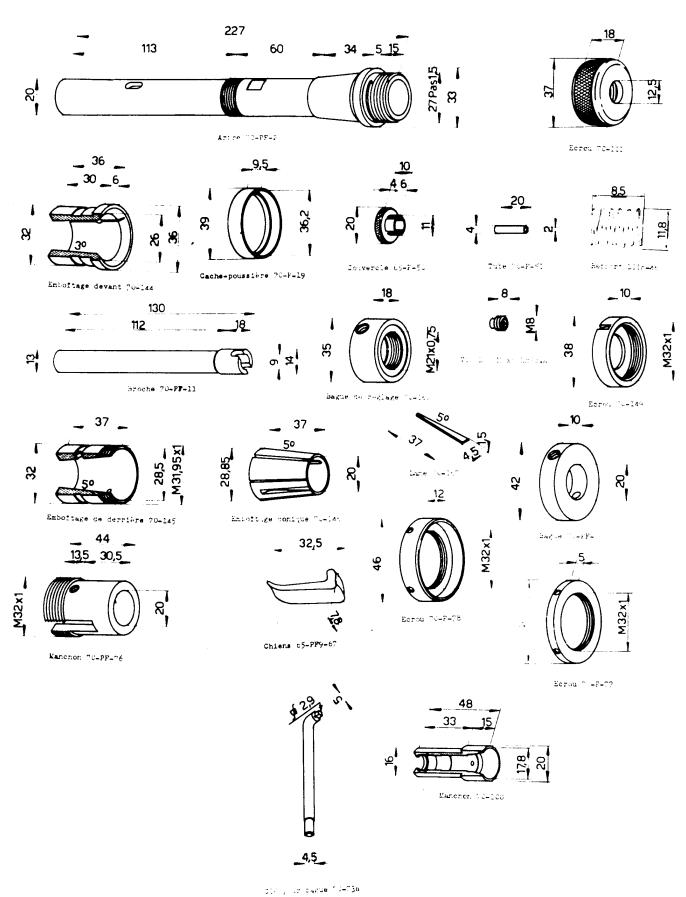
TOUR 65-70 APPAREIL A FILETER PAR CARDAN ART.№111



TOUR 70 DISP. DE SERRAGE PAR LEVIER 12W ART.№174

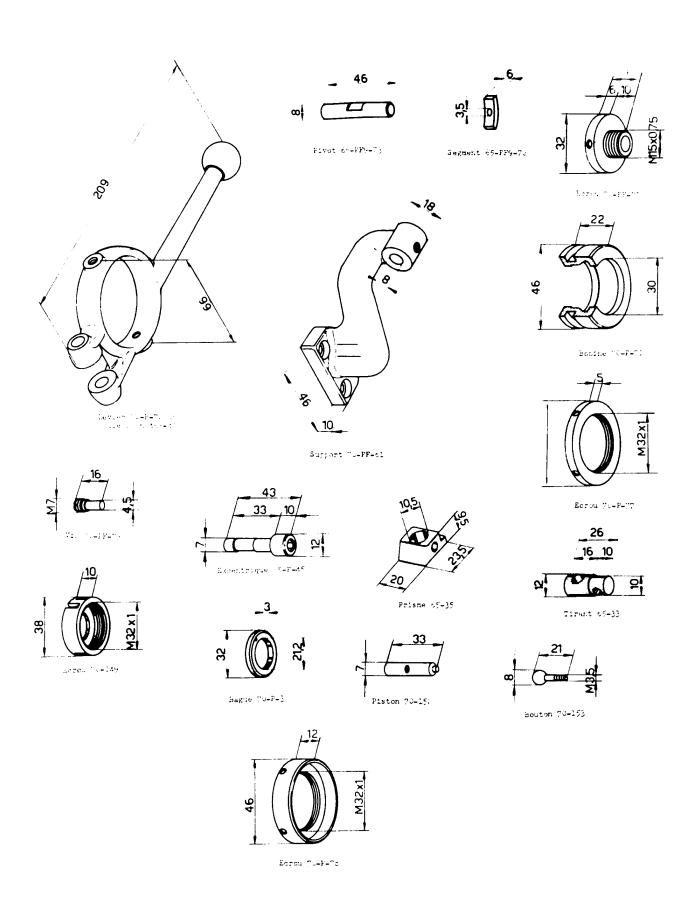




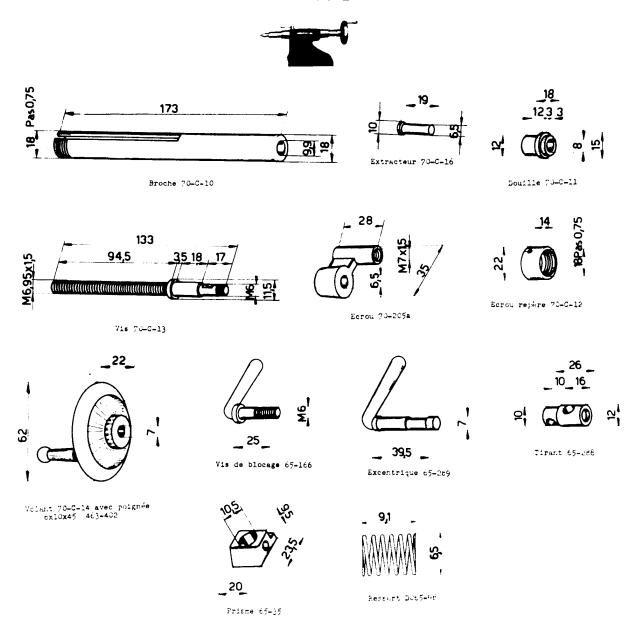


TOUR 70

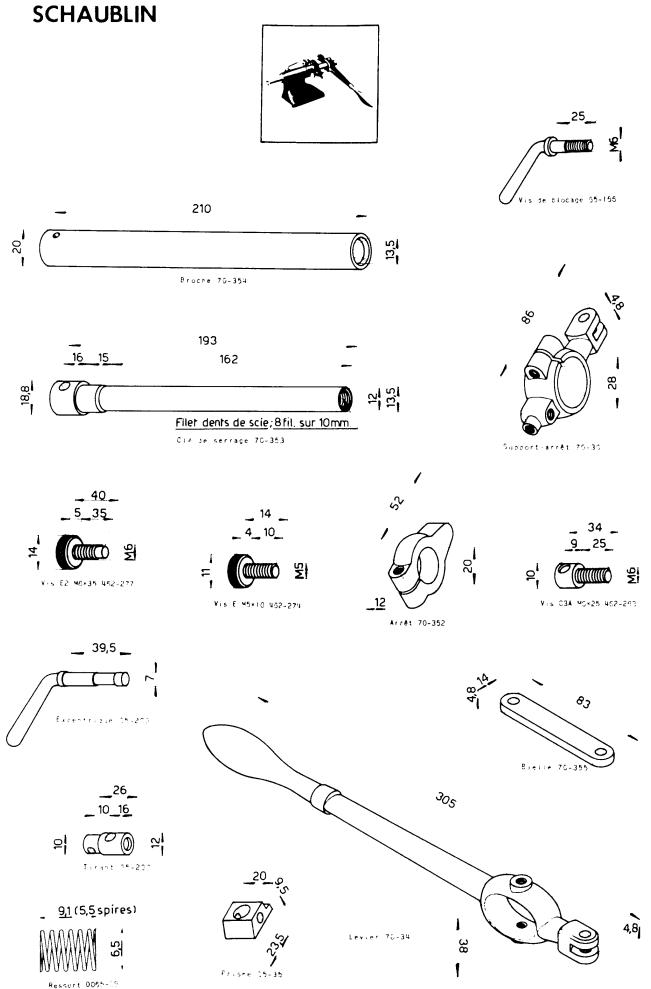
POUPEE 12F ART.Nº 197 ANCIEN MODELE



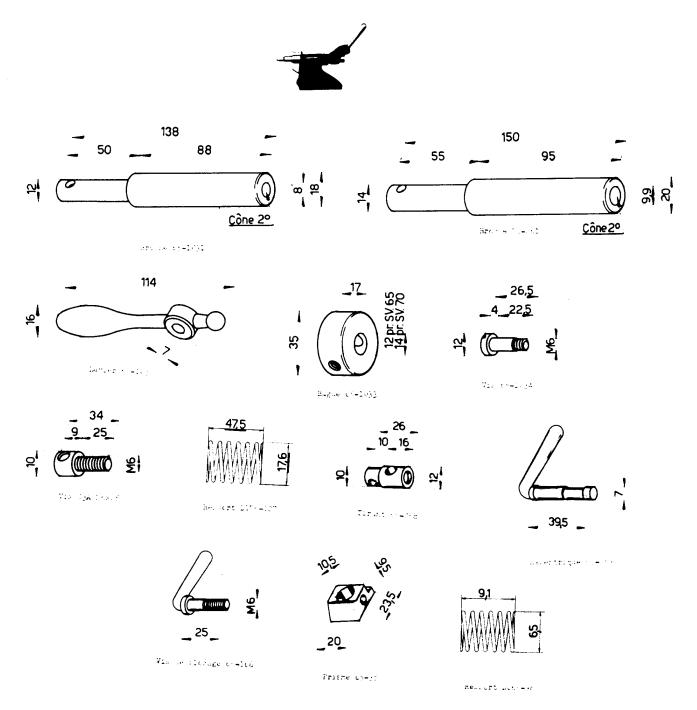
TOUR 70 CONTRE-POUPEE ART. Nº 277



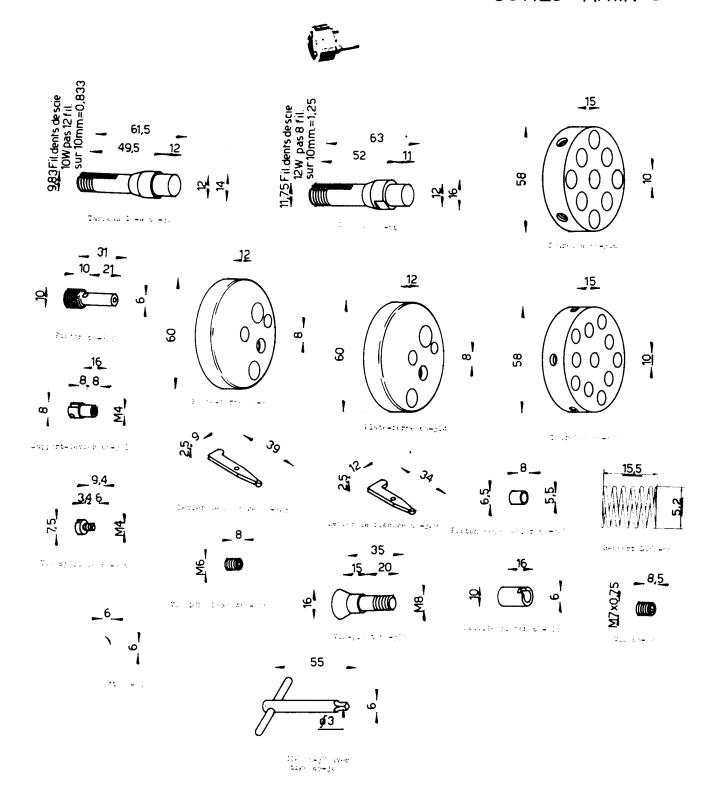
TOUR 70 CONTRE-POUPEE A LEVIER ART. Nº302



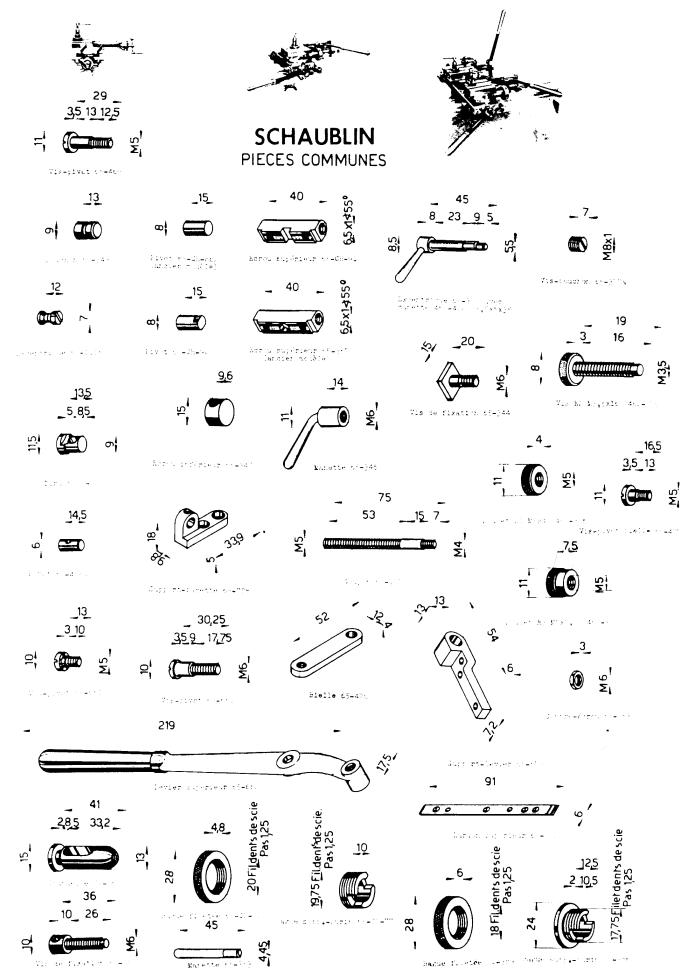
TOUR 65-70 CONTRE-POUPEE A LEV. A RESS. ART.№ 303



TOUR 65-70 TOURELLE REVOLVER A 4 & 5 OUTILS ART.№ 313

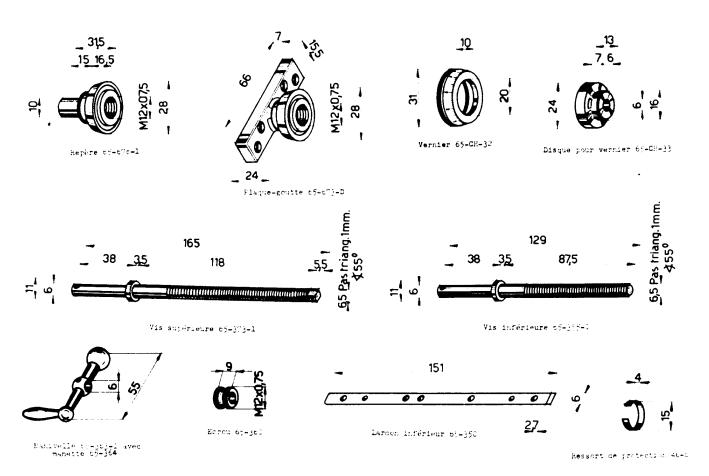


TOUR 65-70 CHARIOT A CHANDELLE ART.№343
TOUR 65-70 CHARIOT UNIVERSEL A 2 COULISSES ART.№1005

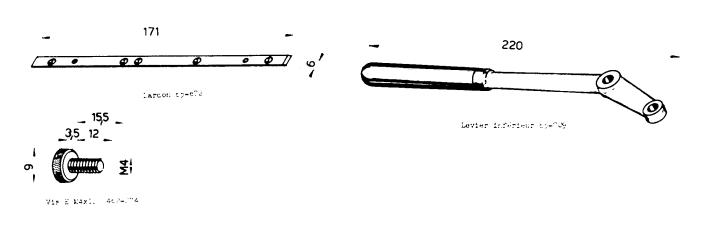


TOUR 65-70 CHARIOT A CHANDELLE ART.№343
TOUR 65-70 CHARIOT UNIVERSEL ART.№708
TOUR 65-70 CHARIOT UNIVERSEL A 2 COULISSES ART.№ 1005
SCHAUBLIN

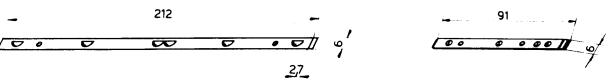
ART. Nº 343



ART Nº 708



ART. Nº 1005

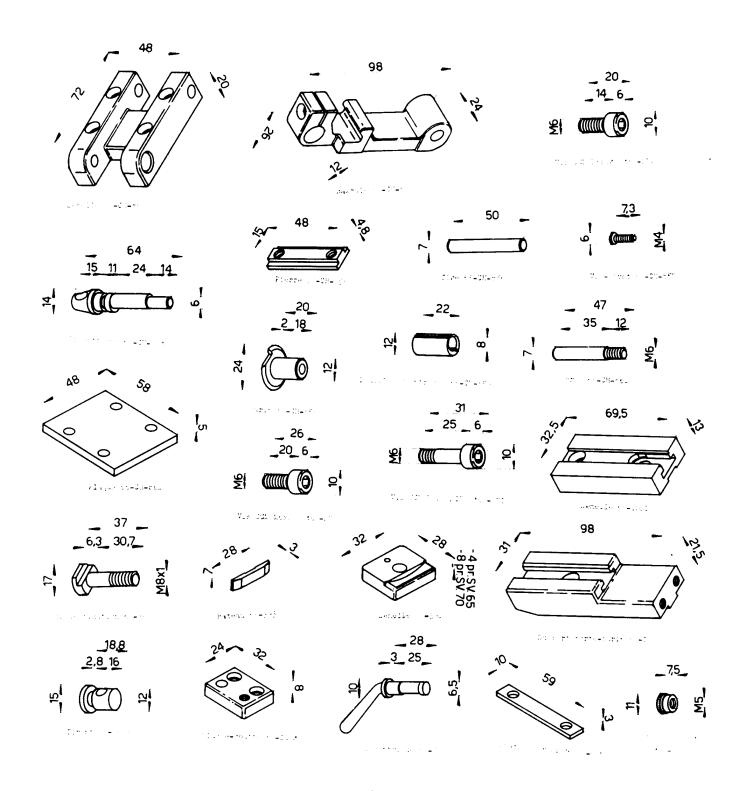


Lardon c5-1012

Lardon e-1011

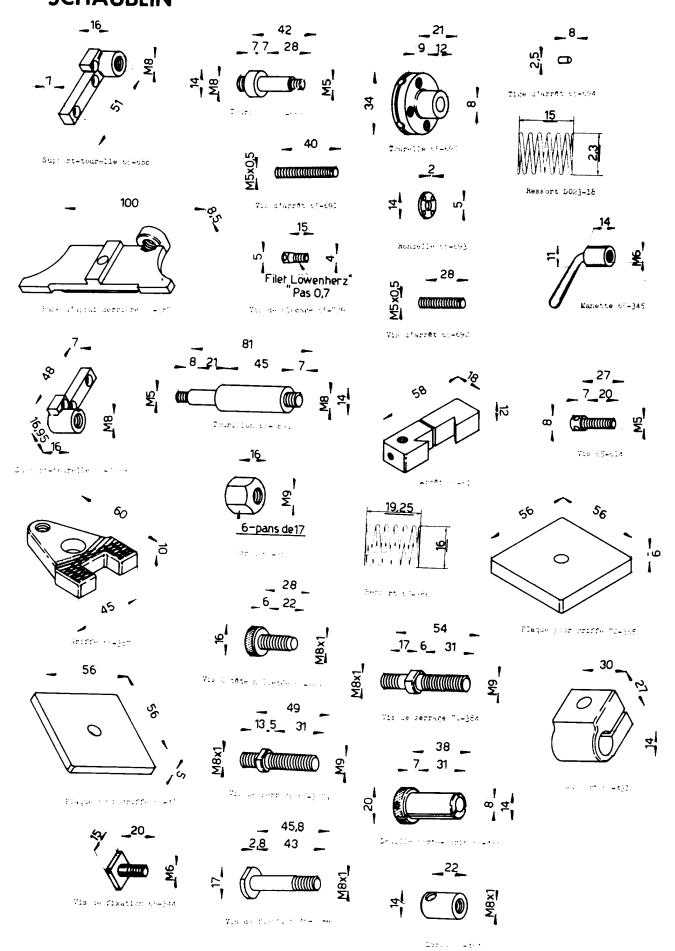
TOUR 65-70

ACCESSOIRES DE CHARIOTS

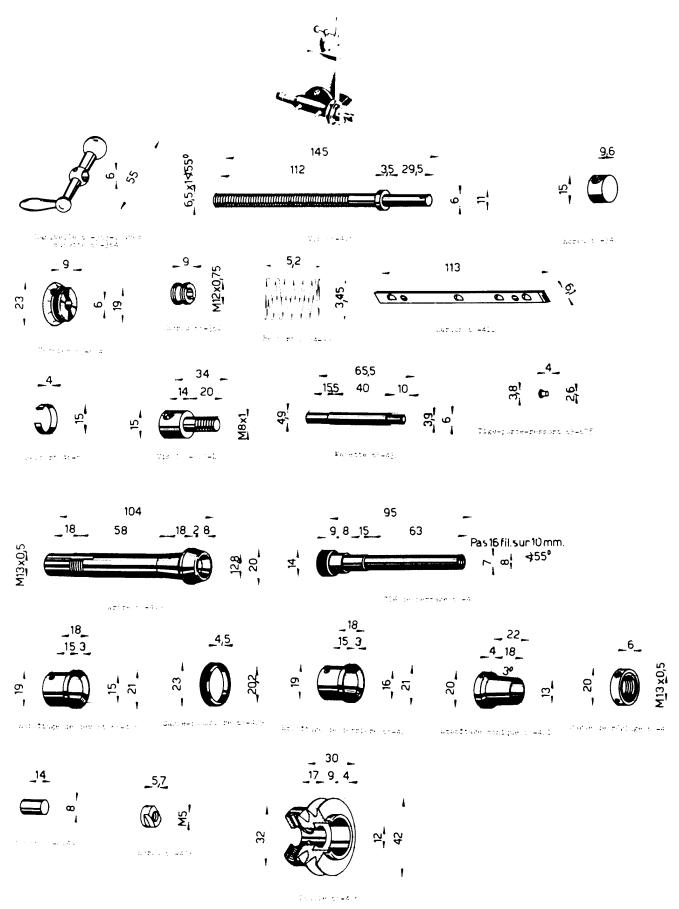


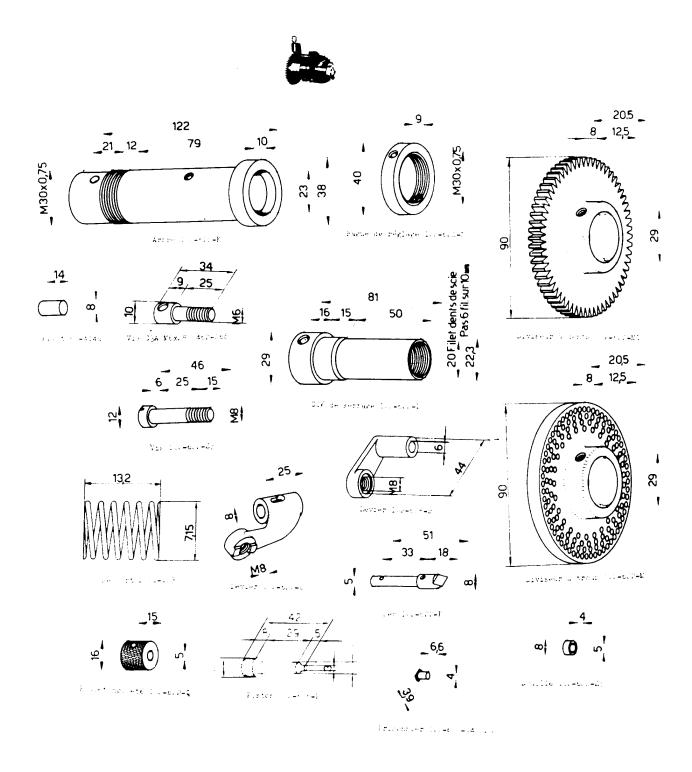
TOUR 65-70 **SCHAUBLIN**

ACCESSOIRES DE CHARIOTS



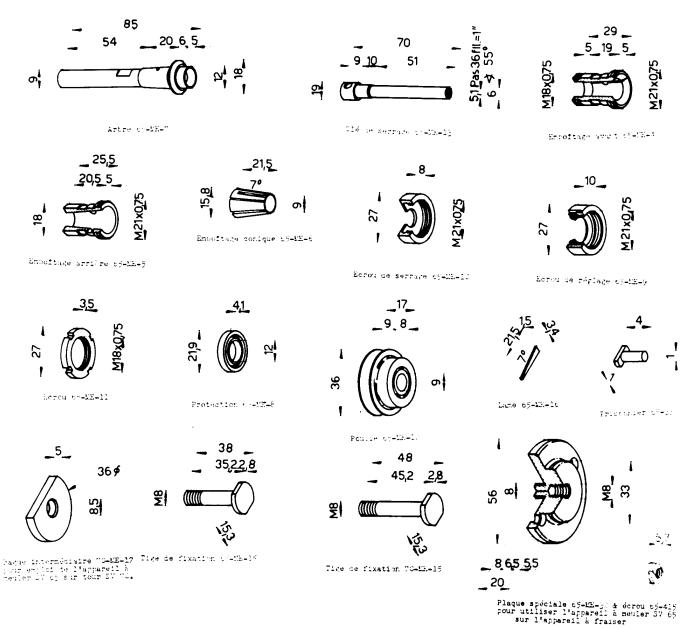
TOUR 65-70 APPAREIL A FRAISER ART.Nº 409



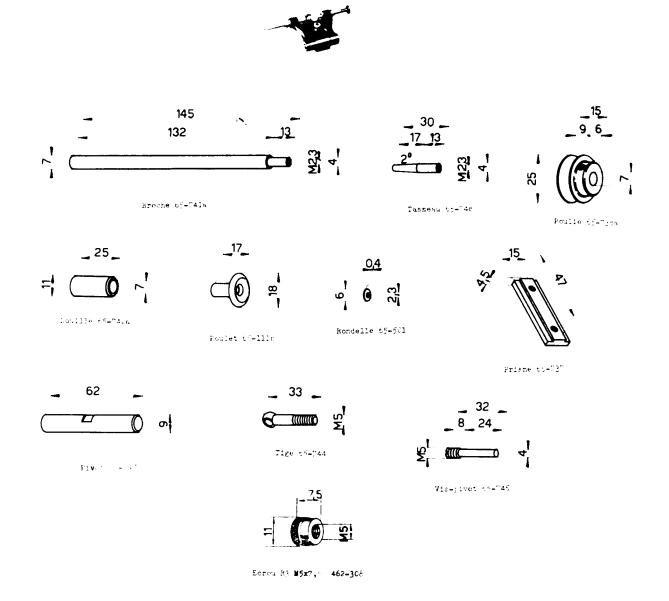


TOUR 65-70 APPAREIL AMEULER EXT. ART.№ 441

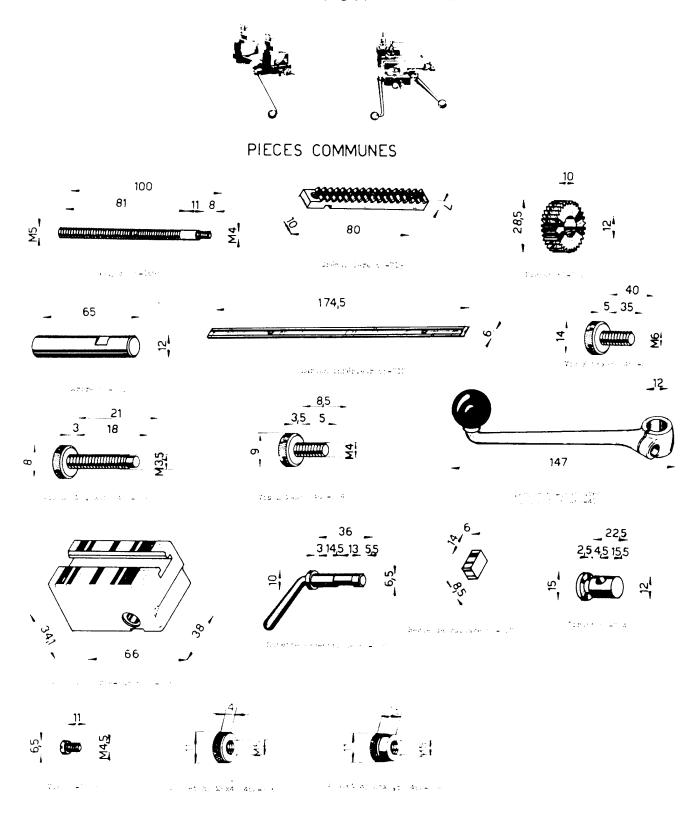




TOUR 65-70 APPAREIL A MEULER INT. ART. № 444

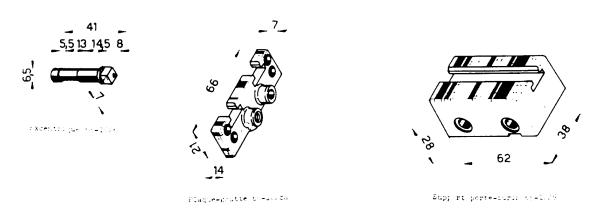


TOUR 65-70 CHARIOT A TRONCONNER ART.№ 489a TOUR 65-70 CHARIOT ATRONCONNER A 2 LEVIERS ART.№ 468

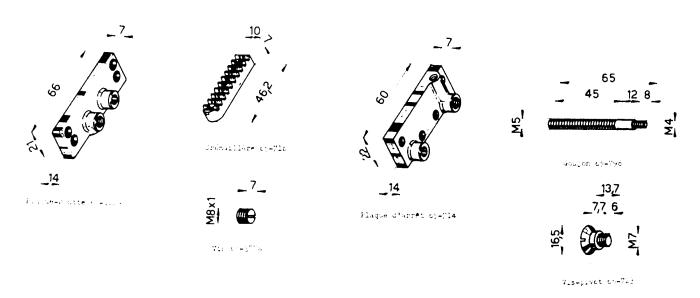


TOUR 65-70 CHARIOT A TRONCONNER ART.№ 489a TOUR 65-70 CHARIOT A TRONCONNER A 2 LEV. ART.№ 468

ART. № 489a



ART. Nº 468



TOUR 65-70 TOUR 65-70 TOUR 65-70

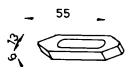
LUNETTE A 3 CHIENS LUNETTE A TROUS SUPPORT A MAIN TIGE DE FIXATION

ART. Nº 524 **ART.Nº 528** ART. № 506

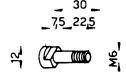




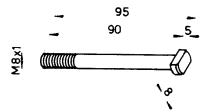




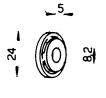
Onier. 65-575



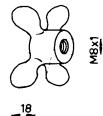
Vis de fixation 65-586



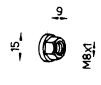
Tire de fixation of=525



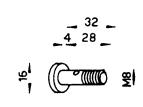
Romielle · -6



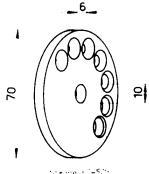
Poulet à 4 liles of-7



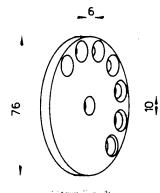
Ecron 65-532



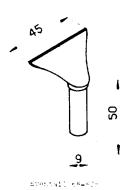
Vis de fixation 65-530



Disque ti-509



Disque TV=0.09



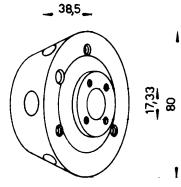
16

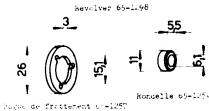
Mahette de clocage 65-507

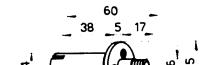
TOUR 65-70 **SCHAUBLIN**

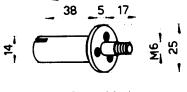
CHARIOT REVOLVER ART.№ 600

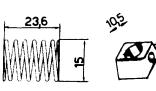


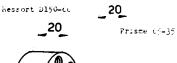


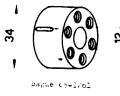


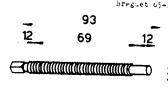








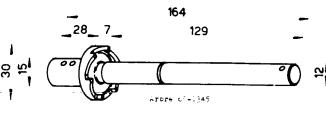


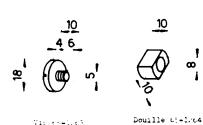


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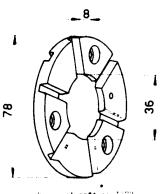
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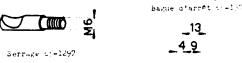
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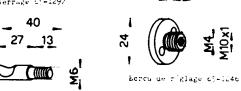


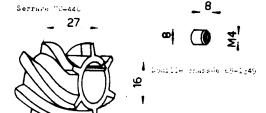


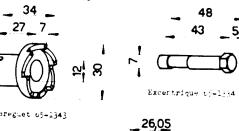


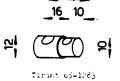


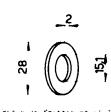






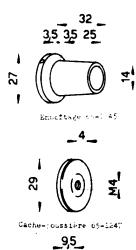


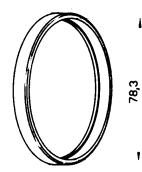




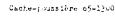


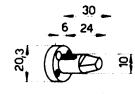


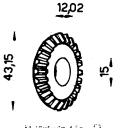




83

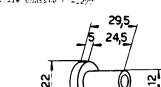


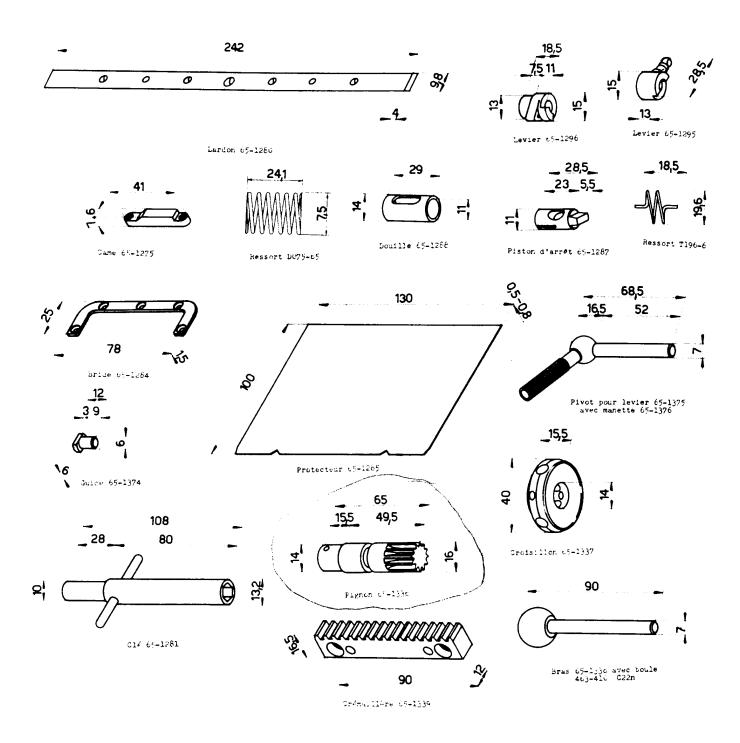




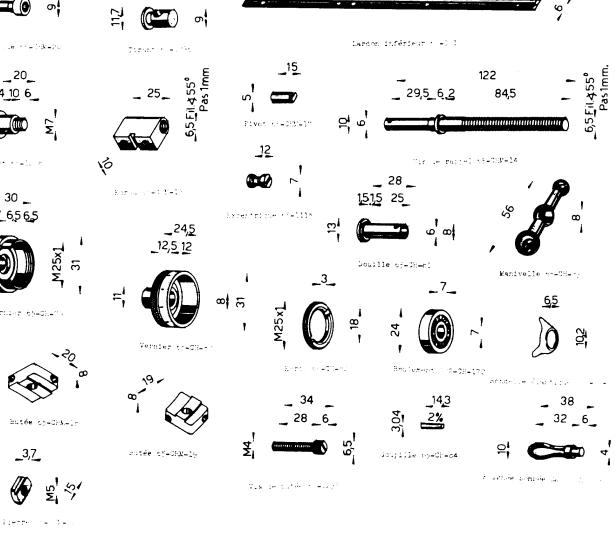
43,5 fixation to-1279



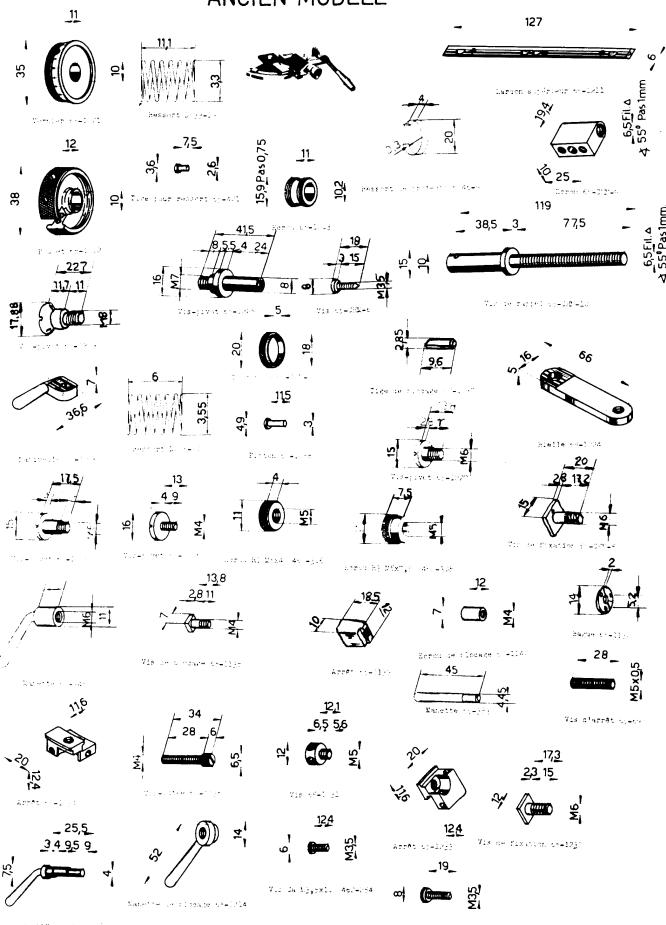




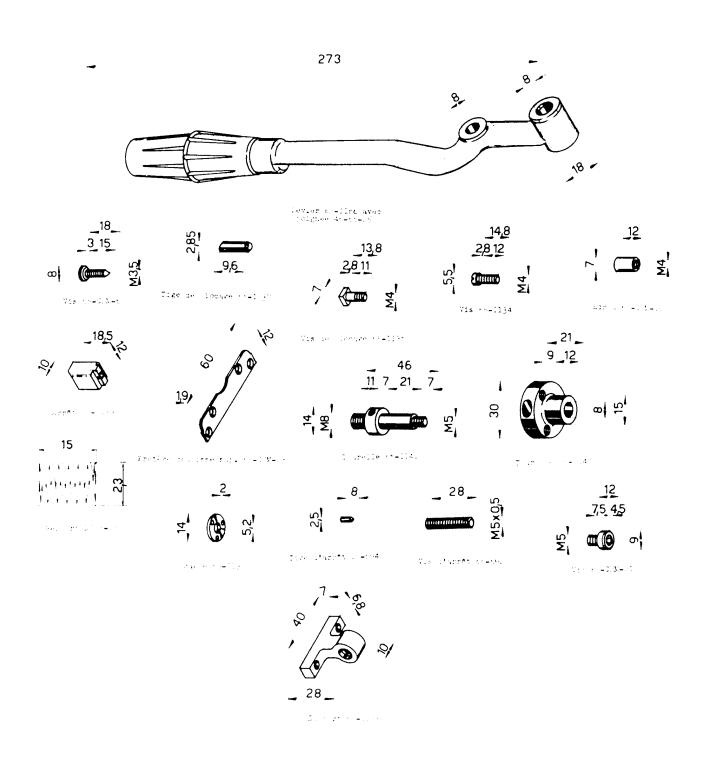
CHARIOT A MEULER ART.Nº 664 TOUR 65-70 **SCHAUBLIN** __20__ _22,7_ 14 11,7 11 28 17,2 142 £ = 1 Lardon supérieur 65-339-12 Vis de fixation e5=0HM=5 Manette 65-345 _13,8 19 28 11 Vic-pivot c5-1886 _17<u>,5</u> _7<u>,5</u> 3 10 4,5 Ecrou R3 M5x7,5 467-308 Bornu H1 M5x4 462+31€ Bielle 55-1024 _ 27,5_ _17_8 _22<u>,5</u> 5 194 234 11,5 Lardon inférieur : -1 1 Experience of = 1:00=20 _20_ 122 84,5 12 10 _ 28 _ Earl. .. .: -1 Y-15 _ 30 _ 1515 25 17_6,56,5 <u>_24,5</u> Douille of-CH-cl 65 Postner mains 65-Cham. Vernier tracher Roulement 1 2-3H-170



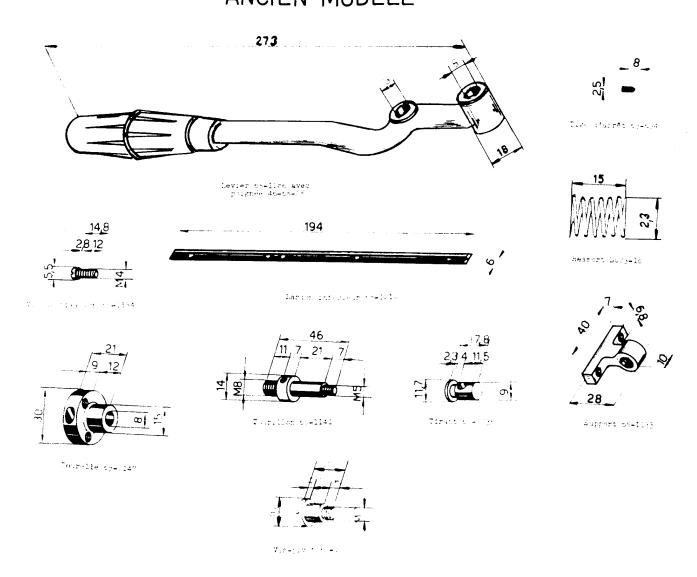
TOUR 65-70 CHARIOT A MEULER ART. № 664 **SCHAUBLIN** ANCIEN MODELE



TOUR 65-70 CHARIOT A MEULER ART. № 664



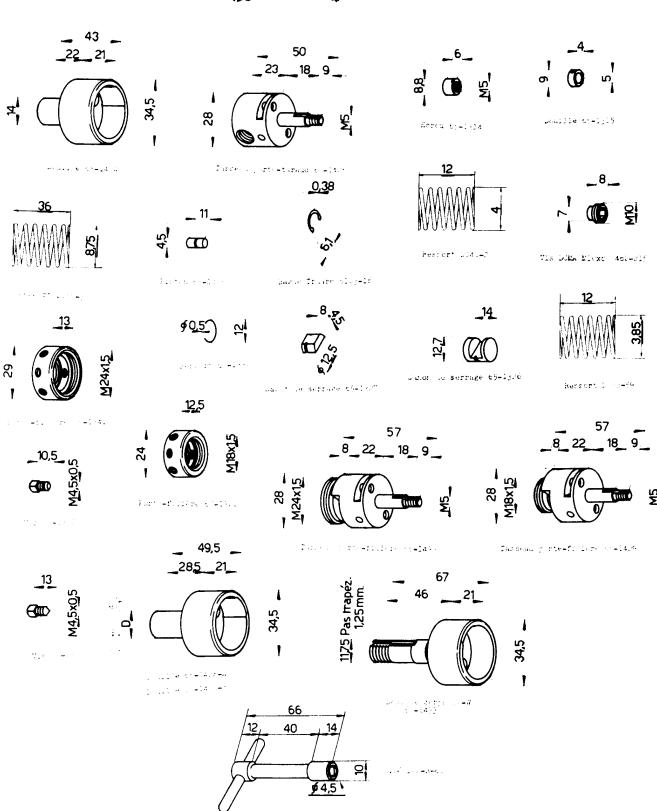
TOUR 65-70 CHARIOT A MEULER ART. № 664 ANCIEN MODELE



TOUR 65-70 TOUR 65-70 PORTE - TARAUD PORTE - FILIERE ART. № 1301 ART. № 1320



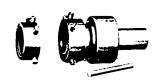


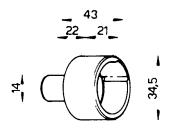


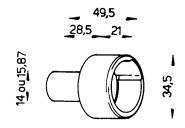
FABRIQUE DE MACHINES SCHAUBLIN S.A. BÉVILARD / SUISSE

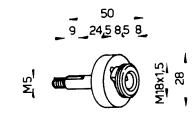
TOUR 65-70 TOUR 65-70 SCHAUBLIN PORTE-TARAUD PORTE-FILIERE ANCIEN MODELE ART. № 1301 ART. № 1320

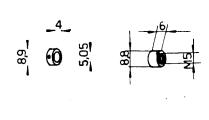


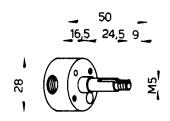


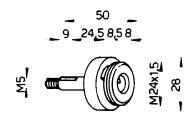


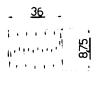


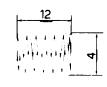


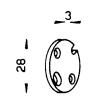


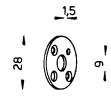




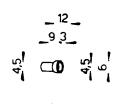


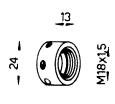








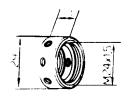


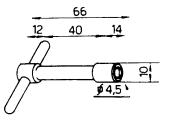






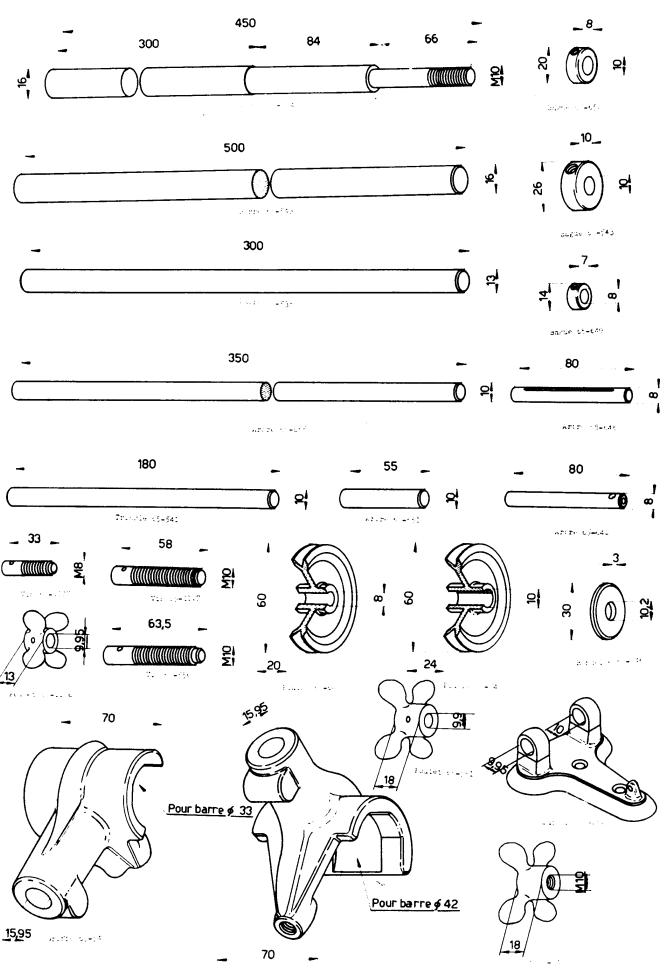


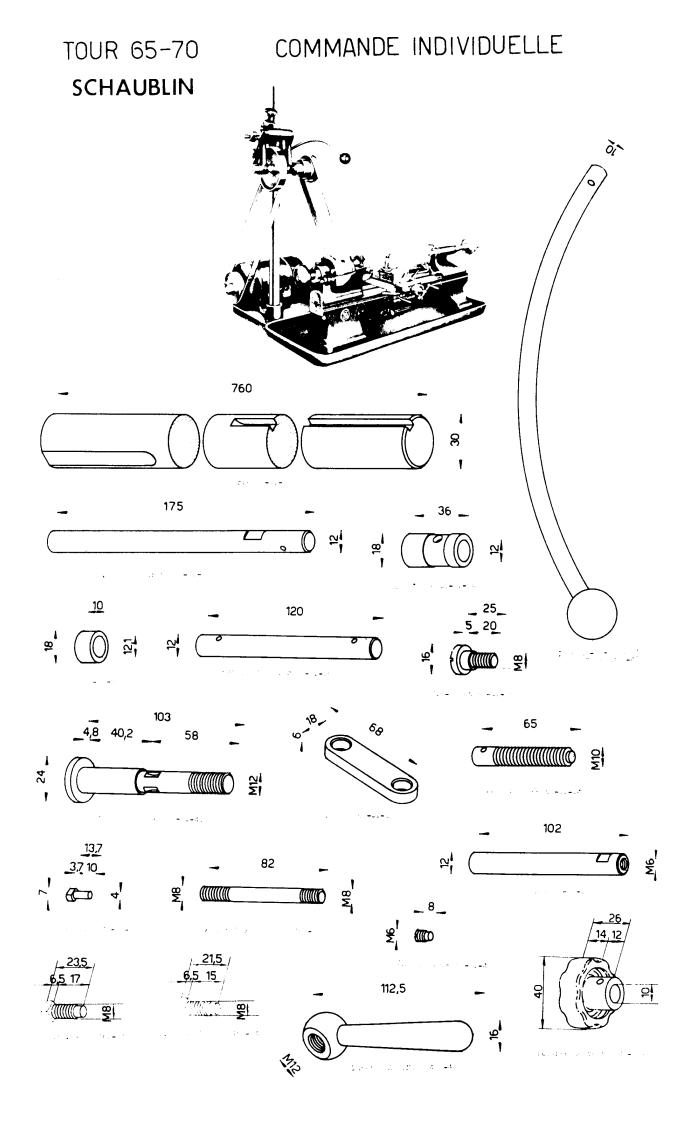




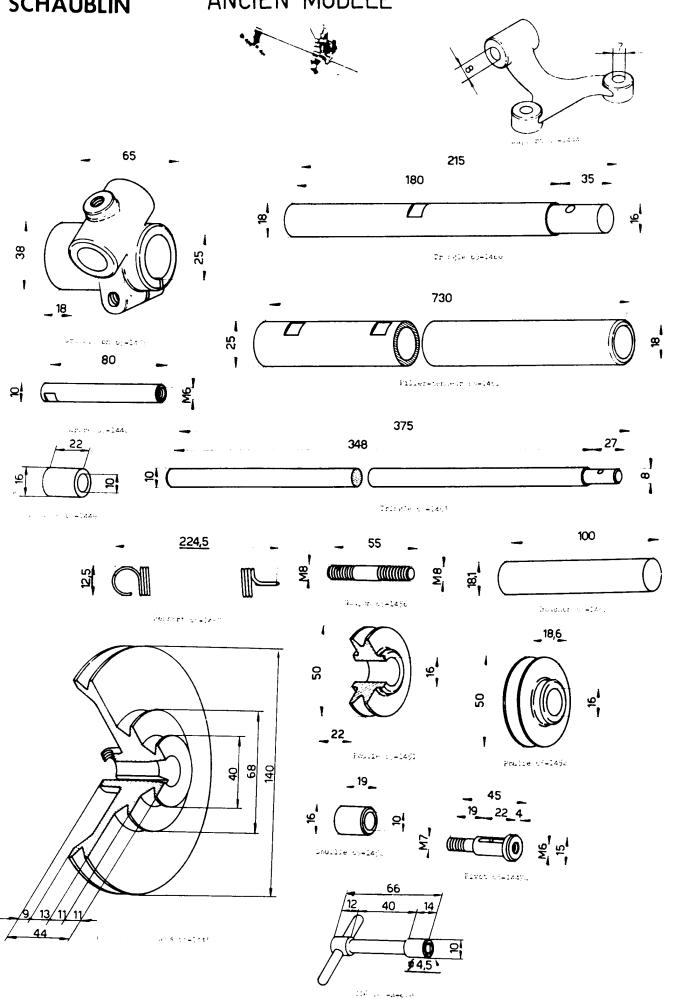


TOUR 65-70 RENVOIS SCHAUBLIN TENDEURS



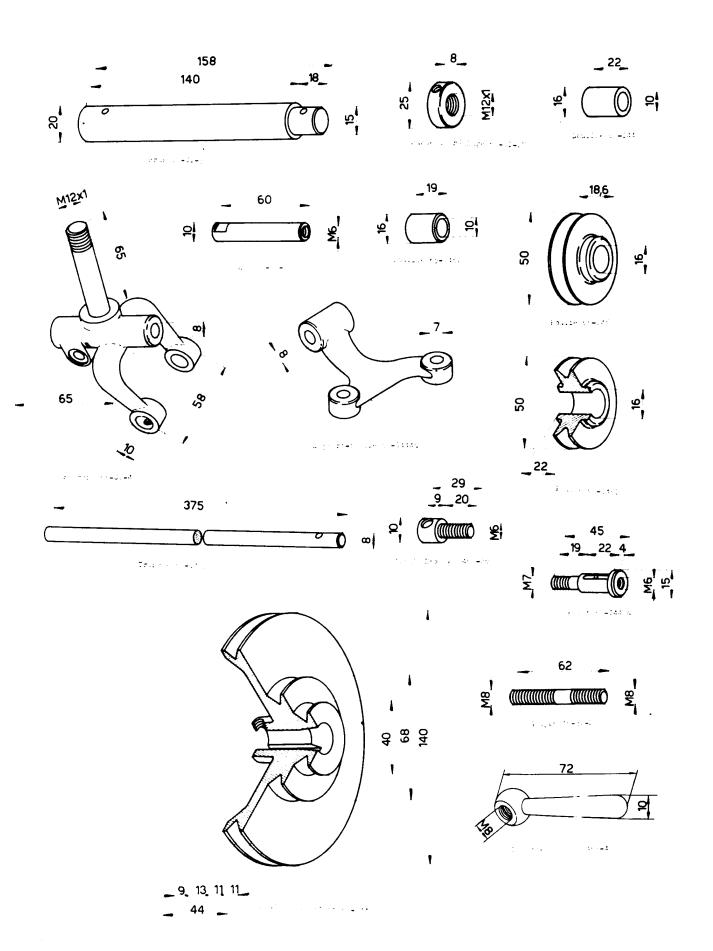


TOUR 65-70 TENDEUR DE RECT. ET FRAIS. ART. № 1442 SCHAUBLIN ANCIEN MODELE



TOUR 65-70 TENDEUR DE RECT. ET FRAIS. ART.№ 1442 SCHAUBLIN





TOUR 65-70 **RENVOIS SCHAUBLIN TENDEURS** 50 10 _13_ Pour barre ∮33 66 42 10 1Ò. री _13 84 ⁵65 70 F .c + 65=03+ 89 260 79 건 M16x1 _20_ Doublie + 4=1096 155 6-pans 27 90 Tige on-1092 180 165 M5_ Arbre of-1094 30 _ 13 83 120 Disgue of as not equip-63,5 Bob 2011e 65-564 88 Ti - 6 = .14:

POUPEE A ROULEMENTS 12F-70-35 EXECUTION FERMEE D118-46 3VIS Ca4x10 Roulement SKF NN 3006K SP 4VIS C M4×8 Goup cyl E5x30 70.35003 70-24003 huileur K7 70-2007 VISD 6x6 70PR:3 70-2008 7035010 70.24004 70.24009 70-35008 VIS D M6x7 65:33 70-35011 Œ Roulement New Dep 993 LO6 70-35013 70-24005 70-35007 70-P-215 Goup cyl A 5x21 70-24007 VIS D7x175 65.35 Ecroy 054MB 70-24001 70-24006 65:33 70-P-206 65.35 7035012 Muller 6005 Roulement Muller 6005 70 PR-18 70P215 Roulement Ecron 0,5dMB Poignée C28N 70 P 206

FABRIQUE DE MACHINES SCHAUBLIN S.A. BÉVILARD/SUISSE